

**SECTION
J**

**SOLID WASTE MANAGEMENT UNITS (SWMUs), HAZARDOUS
WASTE MANAGEMENT UNITS (HWMUs), AND AREAS OF
CONCERN (AOCs)**

**Evoqua Water Technologies
2523 Mutahar Street
Parker, Arizona 85344**

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SOLID WASTE MANAGEMENT UNITS, HAZARDOUS WASTE MANAGEMENT UNITS, AND AREAS OF CONCERN

This section identifies each of the known solid waste management units (SWMUs), hazardous waste management units (HWMUs) and Areas of Concern (AOCs) at the facility and provides the information required by 270.14(d)(1) and (2).

The following definitions are found in EPA regulations, guidance, and preambles to RCRA rulemaking notices.

- A **“Solid Waste Management Unit”** is “[a]ny discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.” [61 Fed. Reg. 19,432, 19,442-19,443 (May 1, 1996); *accord* EPA, Call Center Questions and Answers (Mar. 1, 2004)]. Examples of SWMUs include container storage areas, tanks, surface impoundment, waste piles, land treatment units, landfills, incinerators, underground injection wells and other physical, chemical and biological treatment units, stormwater retention ponds containing contaminated sediments, industrial sewers designed to collect wastes, wood preservative kickback areas.
- A **Hazardous Waste Management Unit** is a “contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area.” [40 C.F.R. § 260.10.] Examples of HWMUs include “a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area.” [Id].
- An **Area of Concern** is “any area of a facility under the control or ownership of an owner or operator where a release to the environment of hazardous wastes or hazardous constituents has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration.” [63 Fed. Reg. 56710, 56715, n.1 (Oct. 22, 1998).] Areas of concern include areas that have experienced one-time spills of hazardous waste or hazardous

constituents that have not been adequately cleaned up. [61 Fed. Reg. 19,432, 19,443 (May 1, 1996).]

J.1 Characterization of the Solid Waste Management Units

The facility has identified three operating areas and one past operating area on the facility containing SWMUs, HWMUs, and AOCs. The areas containing these units are:

- 1) The container storage area,
- 2) The storage tank and unloading area, consisting of tanks T-1, T-2, T-5, T-6, and T-18, and the Hopper H-1,
- 3) The carbon reactivation furnace and associated emission control equipment (RF-2), and
- 4) The inactive carbon reactivation furnace and associated emission control equipment (RF-1) as well as T-8.

Within these areas, a list of SWMUs, HWMUs, and AOCs has been compiled for inclusion with this Part B Permit Application. Tables J-1, J-2 and J-3 list the identified SWMUs, HWMUs, and AOCs, respectively. The SWMU and HWMU tables provide the following information for each identified unit:

- 1) The designation of each type of unit (name, description);
- 2) The general dimensions and structural description of each unit;
- 3) The date each unit was first operated; and
- 4) Specification of all wastes that have been managed in each unit, to the extent available.

The location of each SWMU, HWMU, and AOC is shown on a series of drawings designated as Figures J-1 through J-7.

J.2 Releases

Any leaks, drips, or spills from any of the solid waste management units identified in Section J-1, above, are routinely cleaned up as soon as practical and the area decontaminated to remove any hazardous wastes or hazardous waste constituents. The facility has experienced four reportable releases of hazardous wastes or hazardous waste constituents from the solid waste management units, as follows:

Nov 10, 1994 – Facility Lift Station Overflow – Reported to NRC, CRIT, LEPC – overflow caused by a power outage.

April 17, 1995 - Facility Lift Station Overflow – Reported to NRC, CRIT, LEPC – overflow caused by power outage.

February 15, 1996 - Facility discharge line was accidentally cut by Southwest Gas contractor relocating natural gas line - Reported to NRC, CRIT, LEPC.

September 26, 1998 – Spill of recycle water from a trailer outside the facility gate - Reported to NRC, CRIT, LEPC.

For each release, a complete investigation and report has been compiled and is kept at the facility. The following information, at a minimum, is recorded for any release from a solid waste management unit identified in Section J.1 above:

- 1) Date, type, quantity, and nature of any release;
- 2) Groundwater monitoring and other analytical data;
- 3) Physical evidence of stressed vegetation;
- 4) Historical evidence of any releases;
- 5) Any state, federal, or local enforcement action to address releases;
- 6) Any public citizen complaints that indicate a release; and
- 7) Any other information showing the migration of a release.

Because these spills have been cleaned up, the spill areas are not included as AOCs, in accordance with the definitions provided above.

TABLE J-1. SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
1	Bermed containment in process area	East of Warehouse	Approx 180' x 55'; concrete	August 1992	Spent activated carbon. See Part A Application for list of applicable waste codes	None
2	Sump by H-1	South of H-1	3'-4" square; concrete	July 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
3	Sump by storage tank, T-9	East of warehouse in between T-9 and RF-2	3'-4" square sump; U-drain 30' long x 16"wide; concrete	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
4	Recycled motive water storage tank, T-9	East of warehouse on containment	10,500 gal 316 series stainless steel	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
5	Rainwater and motive water storage tank, T-12	East of warehouse on containment	25,080 gal Mild steel	1992. Removed from service in 2002.	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-1. SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
6	Wastewater storage tank, T-11 System	East of the warehouse and south of RF -2	10' Dia x 20' H; Approx 12,000 gal fiberglass	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
7	Sump by cooling screw under Venturi scrubber tank	East of warehouse beside RF-2	3'-4" square; concrete	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
8	RF-2 scrubber water equalization tank, T-19	Under RF-2 Structure	Approx. 1000 gal Fiberglass	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
9	Hazardous waste debris bin	North of warehouse on containment by H-1	20 - 40 cubic yards Mild steel	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
10	Spent carbon storage warehouse grated trenches and sump	Warehouse in containment area	Trench 3 ft, 4 in square sump U-drain 50 ft long, 16 in wide; cross drain sections 40 ft long 16 in wide Concrete	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-1. SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
11	Hopper containment pad	Outside H-1 structure	Approx 60' x 44'; concrete	July 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
12	WWTP	Inside warehouse	Fiberglass, mild steel modular water treatment system. Separate containment.	October 2003 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
13	Wastewater lift station and piping system (old)	At the end of access road to plant. Old piping from Tank T-11 to the Lift Station	Approx. height 15 ft; outside diameter 5 ft Lift Station: mild steel/concrete/fiberglass Old piping system PVC.	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
14	Spent carbon unloading/transfer area containment pad	North area of facility	Approx. 44 ft by 80 ft	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
15	Satellite Accumulation Area	North side of warehouse	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None
16	Satellite Accumulation Area	South side of drum containment	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None
17	Satellite Accumulation Area	East of Control Room	≤ 55 gallons (metal or plastic)	August 1992 to present	Various Debris	None

TABLE J-1. SOLID WASTE MANAGEMENT UNIT IDENTIFICATION

No.	SWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
18	Satellite Accumulation Area	Laboratory in Admin Building	≤ 55 gallons (metal or plastic)	August 1996 to present	Laboratory Debris and laboratory Testing	None
19	Satellite Accumulation Area	Underneath Spent Carbon Baghouse	≤ 55 gallons (metal or plastic)	August 1992 to present	Spent Carbon Dust from Baghouse	

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
	Spent carbon reactivation furnace - RF-1 and Associated Equipment (Dewater screw)	South of RF-2	Furnace shell – carbon steel; internal firebrick lining and block insulation; hearths and furnace roof constructed with firebrick; furnace roof is comprised of firebrick backed with block insulation and castable insulation; bottom hearth is insulated with block insulation and castable insulation	August 1992; Shut down in 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
2	Spent carbon reactivation furnace RF-2 and Associated Equipment (Dewater Screw, Weigh Belt)	East of warehouse	Furnace shell – carbon steel; internally lined with firebrick and block insulation; hearths and furnace roof constructed with firebrick; furnace roof is comprised of firebrick backed with block insulation and castable insulation; bottom hearth is insulated with block insulation and castable insulation; continuously seal welded internally to assure an air-tight assembly. Dewatering screw length 17 ft; diameter 8 in.	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
3	3 RF-1 Air pollution control equipment					
	Afterburner	RF-1 structure	Refractory lined steel	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
	Venturi scrubber	RF-1 structure	Hastelloy C	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
	Packed bed scrubber	RF-1 structure	Fiberglass	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
	Emissions stack	RF-1 structure	Mild steel	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
4	RF-2 Air pollution control equipment					
	Afterburner	RF-2 structure	Refractory lined steel cylinder chamber	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
	Venturi scrubber	RF-2 structure	Hastelloy C	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
	Packed bed scrubber	RF-2 structure	Fiberglass	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
	Wet electrostatic precipitator	RF-2 structure	Fiberglass/AL6XN	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
	Induced draft fan	RF-2 structure	300-series SS	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
	Emissions stack	RF-2 structure	Fiberglass surrounded by a mild steel shell	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
5	Spent carbon unloading hopper H-1	North end of facility on containment	5000 lb capacity; mild steel	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
6	Spent carbon unloading hopper H-2	Inside warehouse facing east wall	500 lb capacity; mild steel	August 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
7	Hopper air pollution control equipment piping and baghouse	North end of facility on containment	Ducting, baghouse and fan are mild steel	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
8	Spent carbon slurry and recycle water transfer system	Inside warehouse on containment	4" pipes hopper to tank; 3" pipes T-tank to furnace feed tank; 300-series SS	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
9	Spent carbon storage warehouse	Inside warehouse	80 ft by 80 ft concrete/ metal	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
10	Spent carbon slurry storage tank, T-1	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
11	Spent carbon slurry storage tank, T-2	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
12	Spent carbon slurry storage tank, T-5	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
13	Spent carbon slurry storage tank, T-6	East of warehouse within containment	8319 gal design capacity	Used tank (1956); 1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
14	Furnace Feed System Tank T-8 and Ancillary Equipment	RF-1 Structure	905 gal 300 series SS	August 1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
15	T-18 and Ancillary Equipment	RF-2 structure	6500 gal 300-series SS	July 1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
16	Wastewater conveyance piping to wastewater treatment tank	East of RF-2 structure	3" PVC piping	August 1992	Spent activated carbon. See Part A Application for list of applicable waste codes	None
17	Spent carbon storage warehouse barrel washer	Next to H-2 in warehouse	2 ft by 3 ft 300 series stainless steel	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
18	Carbon adsorber - PV1000	North of Containment Pad for Storage Tanks	1000 lb carbon capacity; mild steel.	August 1992	Spent activated carbon. See Part A Application for list of applicable waste codes	None
19	Carbon adsorber WS-1	Beside spent carbon storage tank	2 x 2000 lb carbon capacity. Mild steel	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
20	Carbon adsorber WS-2	Beside H-1	5000 lb carbon capacity Fiberglass	1992 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	None
21	Carbon adsorber WS-3	Beside RF-2	1000 lb carbon capacity Mild steel	1996 to present	Spent activated carbon. See Part A Application for list of applicable waste codes	See Section J.2
22	Slurry transfer inclined plate settler tank	Adjacent to the venturi scrubber	Mild steel	1992 to 1994	Spent activated carbon. See Part A Application for list of applicable waste codes	See Section J.2
23	Scrubber recycle tank T-17	Beside RF-1	Mild steel	1992 to 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None
24	Filter press	Next to scrubber system for RF-1	Mild steel with polypropylene plates	1992 to 1994	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-2. HAZARDOUS WASTE MANAGEMENT UNIT IDENTIFICATION

No.	HWMU Type/Designation	Location	General Dimensions and Structural Description	Date Unit was First Operated	Identification of Wastes Managed in Unit	Releases from Unit
25	New Facility Discharge Piping System	New piping bypasses Lift Station to POTW	6" PVC	February 1996	Spent activated carbon. See Part A Application for list of applicable waste codes	None

TABLE J-3. AREA OF CONCERN IDENTIFICATION

No.	AOC Type/Designation/Location	Management Requirements at Closure
1	Spent carbon unloading and transfer area.	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 5 & 7.
2	Tank area concrete containment pad	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 3.
3	Receiving area/pad	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 8.
4	Hopper H-1 loading/unloading area	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 4 & 5.
5	Hopper H-2 loading/unloading area	Sampling. See Closure Plan Container Area Sample Locations 1 & 2.
6	Spent carbon storage warehouse	Sampling. See Closure Plan Container Area Sample Locations 1, 2, & 3.
7	Furnace feed systems	Sampling. See Closure Plan RF-1 and RF-2 Process Area Sample Locations 1 & 2
8	Recycled motive water tank T-9	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 6.

TABLE J-3. AREA OF CONCERN IDENTIFICATION

No.	AOC Type/Designation/Location	Management Requirements at Closure
9	Rainwater, dewatering screw, and motive water tank T-12	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 2.
10	Spent carbon storage warehouse barrel washer	Sampling. See Closure Plan Container Area Sample Locations 1, 2, & 3.
11	Bermed containment area in process area	Sampling. See Closure Plan RF-1 and RF-2 Process Area Sample Locations 1, 2, & 3.
12	Sump by unloading hopper H-1	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 4.
13	Sump by tank T-9	Sampling. See Closure Plan Tank Area and Unloading Area Sample Location 6.
14	Spent carbon storage tanks and carbon adsorbers	Sampling. See Closure Plan Tank Area and Unloading Area Sample Locations 1, 2, & 3.